

## Overview

The design approach employed by IFS for equipment mounted within the model R3 Chassis Rack Unit with Integral 115/230 VAC Power Supply, provides for the elimination of a single-point failure in the event of a major fault within any module located within the chassis rack. This is accomplished through the use of automatic electronic current limiting within each rack-mountable module, rather than to provide the current limiting within the power supply unit which supports the power requirements for equipment located within the rack. In nearly all competing designs, a major fault within a module, located within the chassis rack, results in the power supply unit going into a current limiting condition, and as a result, all of the modules located within the rack shut down. The R3 Rack design employed by IFS eliminates this possibility, as only the faulty module shuts down, and the operation of the other devices within the rack continues unimpaired. This automatic current limiting feature is also self-resetting, should the fault or overload be of a temporary or intermittent condition. Furthermore, all modules located within the chassis rack are hot-swappable, so that it is not necessary to power-down the rack when removing or replacing modules.

Rather than utilizing a switching-mode or linear DC power supply for providing the operating power to the rack as employed by most competing designs, the IFS Model R3 Chassis Rack uses a simple under stressed step-down power transformer, and all rectification, filtering, and regulation is performed within each rack mounted module. The use of a step-down power transformer for the power supply unit results in a significantly higher MTBF than any switching-mode or linear DC power supply can provide, as there are no semiconductors, electrolytic capacitors, etc., to degrade the reliability of the supply. In addition, the high-reliability transformer power supply and current limiting built into each module, eliminates the necessity of providing redundant power supplies within the chassis rack, as the overall system reliability is still much higher (and less costly) than can be provided with a redundant power supply design approach.

# Rack Mount Card Cage

Provides for the elimination of a single-point failure in the event of a major fault within any module located within the chassis rack.



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Specifications subject to  
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## Agency compliance



Made in the USA

## Specifications

Input Voltage:	115 VAC (other voltages available)
Power Supply: (to plug-in modules)	20 VAC C.T. @2.8A
# Slots/Spacing R3:	14 one-inch modules or 7 two-inch modules
Differential Phase:	<5°
<b>Fusing</b>	1A slow blow (Rack Power Supply) (Plug-in modules individually electronically fused)
<b>Ac line cord</b>	Detachable, IEC-connectorized. Allows easy field replacement or exchange for various worldwide AC power plug configurations.
<b>Electrical &amp; Mechanical</b>	
Circuit Board:	Meets IPC Standard
Size (in./cm.) (LxWxH)	
Rack:	19.0 x 7.0 x 5.25 in., 48.3 x 17.8 x 13.3 cm
Shipping Weight:	< 5 lbs./2.15 kg
<b>Environmental</b>	
MTBF:	> 100,000 hours
Operating Temp:	-40° C to +74° C
Storage Temp:	-40° C to +85° C

## Ordering Information

Part Number	Description
R3	19" Rack, 115 VAC Input (includes power supply)
R3-DC-115	19" Rack, 115 VAC Input (DC back plane included)
R3-24	19" Rack, 24 VDC Input (includes power supply)
R3-48	19" Rack, 48 VDC Input (includes power supply)
R3-230	19" Rack, 230 VAC Input (includes power supply)
R3-CH	19" Rack, (no power supply)
Options	Description
R3-BP	Blank Panel (1")
PS-R3	115 VAC power supply
PS-R3-24	24 VDC power supply
PS-R3-48	48 VDC power supply
PS-R3-230	230 VAC power supply



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